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10/019,852	11/07/2001	Shigeki Mori	712-032	1854
47888	7590	03/30/2005	EXAMINER	
HEDMAN & COSTIGAN P.C. 1185 AVENUE OF THE AMERICAS NEW YORK, NY 10036			PADGETT, MARIANNE L	
			ART UNIT	PAPER NUMBER
			1762	

DATE MAILED: 03/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/019,852

Applicant(s)

MORI ET AL.

Examiner

Marianne L. Padgett

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3-5,7-11,15 and 19-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-5,7-11,15 and 19-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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1. The replacement page for figure 2(a) and (b) is acceptable to the examiner.
2. The reformatting of the amendment to the specification improves its readability, and applicant's comments concerning the Rule 34 amendment is noted. That amendment was then found in the scanned file mixed in with PCT WO and priority documents. It is noted that while this amendment (12/10/04) shows the deletions correctly (lined through), the additions were added without underlining, but will be accepted due to the presence (now annotated so it can be found) of the Rule 34 amendment in the scanned file.
3. The amendment filed on 12/10/04 (or 3/8/04 or Rule 34) is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

With respect to changing the density range from "1.2 to 2.3" to --1.2 to 1.6--, the values in table 6, as their meaning is described in Ex. 3, especially on p. 35, do not appear to be providing a range as amended in a broadly stated concept as claimed. The value of 1.59 g/cm<sup>3</sup> which applicant's have rounded to 1.6 is the density produced only in test No. 9 on the bottom portion of the bottle, while the middle portion has 1.22 g/cm<sup>3</sup>, but the top or shoulder portion has 2.09 g/cm<sup>3</sup>, so the range of densities supported by this example are for a variation over a single bottle in a single example, not a range that may be applied in general by the process as implied by the amended objectives on pages 10 and 11. Nor would using end points from two different areas on the bottle, while ignoring the shoulder area make sense. To make the change on p. 37, contradicts the information of table 6. Therefore, the change in range and context is considered to include New Matter. Note the original range as disclosed on p.12, lines 11-15 of the original

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specification, i.e. 1.2-to 2.3g/cm<sup>3</sup> included both the maximum and minimum density values from the three portions of examples 9 and 10 combined, hence as such in the original context, read in light of the table 6, disclosed a possible range of density variation over the surface of the bottle. While this is a subtle difference, it is not at all the same thing as the change made by this amendment.

With respect to changing "16 to 52 hydrogen atomic %" to --39 to 50...-- (p.10) or --39 to 52-- (p.11), which was said to be provided by a copy of an attached portion of the original Japanese priority document, there was no such attached portion found in the scanned file, so at present no support is present in a cited form. Furthermore, the examiner notes that there are 3 original JP priority documents (26, 54 and 34 pages long), hence if applicants will cite document #, page and lines of relevant support, with relevant portion translated (preferably citified), so that the context may be ascertained by the examiner to provide support, this change may then be evaluated. However, it is also noted the table 7, discussed on p. 39 to 40 (Ex. 4) has 2 tests in which over one bottle the H at. % varied from 16.1 – 28.6 % (#11) or from 51.9 to 35.8 % (#12), and where again the density varied over various parts of the body from 1.2 to 2.3 gm/cm<sup>2</sup>, thus NOT supporting applicants' changes.

Applicant is required to cancel the new matter in the reply to this Office Action.

4). Claims 15, 19 and 24-27 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

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See above discussion in section 3. Also in claims 15 and 25, even if the specific ranges were shown to be supported, there is no supported enablement to producing such coating on any other type of molding than the disclosed containers, hence the claims are broader than the scope of the enabling disclosure, thus introduce new matter in that respect also.

5). Claims 1, 3-5, 7-8, 11, 20-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, how the “top portion” and the “shoulder portion” relate to each other is unclear, as the latter is described as being in the same position as one would consider the “top” to encompass considering normal usage of the term, hence the scope is unclear. Possible meanings that may be considered to include the shoulder and the top being the same portion; the shoulder to be a part of the top; or being between the body and the top. Clarification of intended scope would be desirable. Also see claims 3-5.

In claim 1, line 22 (2 lines above new additions to the end of the claim) “the bottom” was in the original claim, so should not have been underlined, but now has inconsistent language with “a bottom portion” in line 3 (was “portion” what was suppose to be added?). Furthermore, in claim 1, NO electrode portion is associated with “the top portion”, hence applicants appear to be claiming both configurations related to Fig and described in related description in the specification, and first and second outer electrical, which overlap for sections of the “body portion” that are below the center of the bottle, where the claimed interposed element would be between the electrodes in an orientation parallel to the container’s side. Such a configuration reads on the claim language, but is not enabled by the specification, hence it is unclear if at is

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applicants intent to include this broader possible interpretation or just inadvertent poor word choice, thus the scope of the claim is ambiguous or vague and indefinite. Claim 3, which adds a third outer electrode, does not affect this uncertainty.

Claims 7, lines 3-7 continues to have the same phrasing problems that claim 1 originally had (see section 3 of the 11/0/03 action), and would have the same problem as discussed above if amended in exactly like fashion. Note uncertainty of the location upper edge of the first electrode with respect to the second electrode and newly introduced interposing elements may also be applied to this claim sequence.

In claim 11 “the outer electrode other than the first...” can refer to several different options, therefore the claim as written which refers to a singular outer electrode is vague and indefinite, as it is uncertain which of the multiple possibilities are being claimed. Noting disclosures on p. 21, which provide alternatives to proceeding discussion consistent with the possible intent, making it --the outer electrodes-- (plural) would be clear and supported. Also see claims 21-22 with analogous uncertainty.

In claim 22 “can be” is not a positive recitation, hence whether it occur is indefinite.

Claim 23, states “it is possible to impart the high-frequency electric power requires for each corresponding part of the container..” (emphasis added), which (1) is not a positive requirement to do anything in the claimed method; (2) appear to use the wrong verb tense; and (3) there were no “parts” introduced in any of the claims from which 23 depends.

In claim 9-10 “the insulator.... elements” (lines 8-9) are objected to as lacking proper antecedent basis, i.e. “the” would be more properly deflected.

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6. Claims 1, 3, 7-8 and 20-23 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The problem discussed above concerning the non-enabled (or uncertain) meaning of the upper edge, first and second outer electrode configuration introduces possible new Matter in to The claims as delineated in section 5 above.

7. Claims 1, 3, 7-8 and 20-23 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for when the second electrode is above the upper edge of the first in the claimed relationship to the center, when the containers are viewed in an upright position, does not reasonably provide enablement for the electrodes overlapping adjacent to the side of the container with the interposing [insulator...] element in between. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims. See above discussions in sections 5 and 6.

8. It has been noted that the date on the transmittal paper for the international filing date is incorrectly given as "11 November 2000", and can be seen to actually be April 21, 2000 as shown in item (22) on the PCT WO 00/71780 A1 priority document/ publication. The Bibliographic information in the PTO's system has been corrected to reflect this.

The examiner has noted that the Oath claims benefit under USC 120 to [09/] 355969 (USPN 6,294,226) and [08/] 776703 (USPN 5,798,139), however they are not related in PALM

to any interrelated cases; neither have the same specification, or any overlapping inventors between any of the three cases; nor is 08/776,703 issued on 8/25/98, copending with even any of the listed Japanese priority documents; plus there is no statement referencing any of these earlier applications/patents in the present application. They are not considered given the above evidence to provide any benefit under USC 120.

9. Claims 1, 3-5, 7, (8), 9-11 and 20-23 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for when the interposed insulation or resistive or capacitive element enables and/or effects a difference in power application or distribution, such that the effective power applied to the first outer electrodes is higher than that which reaches or effects any of the other outer electrodes, does not reasonably provide enablement for interposed elements that have no necessary effect on the energization of the various electrode segments. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims.

As presently written, the interposed element can be at any place that might be considered to meet the criteria of between the electrode sections, but they need have no effect on the electrical conductivity between those segments. For example, sections of electrodes might employ an o-ring to create an air tight seal when joined, but be configured so that the sections are in electrical contact, thus not producing a gap which effects an insulating effect as required by the teaching of the specification (p.14 and 17). Thus, merely reciting the presence of this feature does not insure it is used in the process to produce the needed effect of the taught invention.



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10. Claims 9-11 and 23 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. See above discussion in section 9.

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

12. Claims 1, 3-5, 7, 9-11, 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimamura (JP 10-226,884), optionally further in view of Zenitani Toshihiro et al (JP 11-256,331), discussed in section 6-7 of the paper mailed 11/10/03.

While applicant's have amended the claims to require the presence of insulators between electrode sections, Shimamura teaches this concept. See the Figures where reference # 30Ac = insulating plate (p.37 of translation) [0122], etc. Also, it is noted that the outer electrodes are defined as being made up of parts 30A(=30Aa + 30Ab) + 30B (cover) or outer electrode 10=10A+10B(cover), where the cover is raised to input the container for treatment, then put back on to create a sealed chamber [0075, 78, 98 and 0101]. Notice is taken that the conventional means for sealing a metal vacuum chamber with a metal lid is for o-rings made of various rubbers, so insulating materials were known to be used, hence it would have been obvious and expected to use such typical means of creating a seal for covers 10B or 30B in the process of Shimamura (884). Note that for the claims as written that lack a specific effect for the use of an insulator, they reads on the mere use of any insulator for any purpose in the claimed location.

Further note that while the claims require the H.F. terminal to be connections to the first electrode, they do not prohibit connections to any other portions of the segmented electrode, and only claims 8 and 20-21 require capacitive coupling, as claim 22-23 do not positively recite this feature.

While Shimamura (884) differs by not attaching the terminal to a bottom portion that ends below the center of the illustrated container, as in applicant's claims 1 or 7, or not explicitly

illustrating a 3 or more section electrode with a HF thermal attached to the bottom one, but Shimamura does teach insulators, illustrate and discuss differential power application, where the lower electrode segment, which effectively includes 30Ab + cover 30C in Fig. 8-13, teach smaller power input at the upper segments and higher power for the lower region surrounding the container in order to not have spots occur in the deposit or cause deformation of the container, and have the same thickness deposited on inner bottom, shoulder and body surfaces ([0105, [0114-120], [0125] and [0127]). In [0130] Shimamura teach that the external electrode can be divided unto more than two divisions according to the external shape of the container being treated, hence it would have been obvious to one of ordinary skill in the art to divide the outer electrode into what ever number and distribution of segments which will produce the taught effects of uniform coating over essentially the entire inner surface of the container, via routine experimentation. It would have been further obvious that this distribution could include the lower electrode segment ending below the “center” of the container, or alternately that the “cover” which is already a separate piece, but a part of the lower electrode segment, so not electrically insulated in Shimamura (884), would have been included in the segmenting for taught effects as required to achieve taught results.

Note that the translation of Shimamura indicates that DLC was taught ([0018, [0066], etc.), as was considered obvious in the last action, hence obviating the need for Toshihiro et al, but it remains cumulative for further discussion of the desirability of DLC coating plastic bottle interiors via plasma, however its cathode is noted to form an integral whole from two pieces and also does not teach capacitive coupling.

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13. Claims 1, 3-5, 7, 9-11 and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimamura (WO 98/37259) considering USPN 6,294,226 B1 the national stage as a translation, discussed in sections 8-10 of the paper mailed 11/10/03.

Applicants' assessment that the amended claims require HF power to be only applied to the bottom (i.e. first) outer electrode is not degreed with, since the claim language only requires that power is applied to the bottom electrode and does not exclude any sort of power application to other (higher located) electrode segments. Furthermore, as in Shimamura (884) discussed above, the WO patent applies power of the claimed relative value to the bottom electrode, which is likewise composed of 30Ab + 30B, hence arguments in section 12 above also apply here. Note the disclosure for insulating members between electrode segments and relative relations between segments for deposition effects (col. 7, lines 41 – col. 8, line 42<sup>+</sup> & 63 – col. 9, line 26<sup>+</sup>; col. 11, line 50 – col. 12, lines 1-10 for mutual insulation and for DLC film evenly formed on the whole container interior; col. 13, lines 11-37<sup>+</sup> teaching electrodes in plural parts mutually insulated, etc; col. 22, lines 51-58 for 30Ac= insulating plate; etc.

Note in either Shimamura reference, the presence of the insulating plates between electrode segments makes capacitive coupling “possible” given the correct parameters or circumstances, hence above inclusion of claims where the limitation is not positively claimed.

14. Applicant's amendment of the product claims to require a range that is contradicted by the data in the specification (tables 6-7), hence introducing new matter removes the product claims from being read on by Tomaswick et al (4,809,876) by changing the range of densities from 1.22-2.33 g/cm<sup>3</sup> to 1.22 to 1.59 gm/cm<sup>3</sup>, in order to exclude the reference's range of 1.7 to 1.8. The unsupported change in atomic % H is still covered by Tomaswick et al, as less

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then 50 at. % H is inclusive of values in the new range of 39 to 52 (50). While the amendment of 12/10/04 removes Tomaswick et al, correction of the apparent new matter problem would reinstate the rejection of section 11 in the paper mailed 11/10/03.

15. The translation of Toshimichi Ito is noted to show on p.26 density values above the presently claimed range, and no at. % H values. The translation of Taniguchi (06-280012) did not provide any evidence of products with ranges of values as presently claimed, although the background does discuss advantage and disadvantages of various ranges of atomic % H.

16. Copending cases to Nagashima (2003/0207115 A1  $\equiv$  10/452,208, but with different claims; and 6,805,931 B2 & 6,589,619 B1, with various product claims lacking current value ranges) are noted as of interest.

17. Claims 1, 3-5, 7, 9-11 and 22-23 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 6-17 of copending Application No. 10/452,208 in view of Shimamura (884 or WO) as discussed above.

The claims of 10/452,208 are generic to the present process and apparatus claims, differing by not giving the presently claimed segmented electrode structure and relative use, but the above discussion of Shimamura references provides such details and obviousness as discussed above, and given treatment of like substrates in the same generally configured external electrode chamber with application of high frequency, it would have been obvious to use the details of either Shimamura reference for the advantages they provide in even DLC coating distribution and preventing deformation of the bottles treated.

This is a provisional obviousness-type double patenting rejection.

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18. The patents/publications to Beldi et al (2005/0003124 A1); Shimada (6,854,309 B2) or Darras et al (6,827,972 B2) are of interest for coating containers with DLC using various external electrode arrangements, but not those as claimed. Darras (effective. Filing date = 9/26/00) is the only one that might be prior art, but is between the international filing data and priority document dates.

19. Applicant's arguments filed on 12/10/04 and discussed above have been fully considered but they are not persuasive.

Claims 8 and 20-21(22-23) would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

20. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

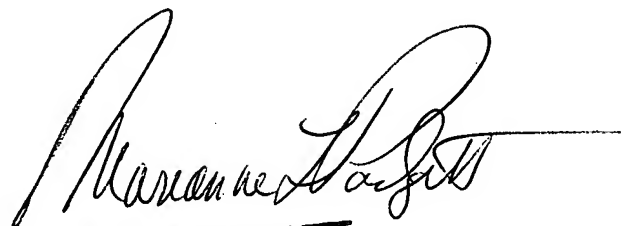
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21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. L. Padgett whose telephone number is (571) 272-1425. The examiner can normally be reached on Monday-Friday from 8:30 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached at (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Padgett/LR  
March 21, 2005  
March 25, 2005



MARIANNE PADGETT  
PRIMARY EXAMINER